Marina Kounavi

re` shaping the edges

the case of Bratislava
Oh, are you going? Goodnight. No, I won’t come. Goodnight. I’ll be going myself in a little. Thank you. Because, in the end, I must get out of this broken-down house. I must see a bit of the city – no, not the moon – the city with its calloused hands, the city of daily work, the city that swears by bread and by its fist, the city that bears all of us on its back with our pettiness, sins, and hatreds, our ambitions, our ignorance and our senility. I need to hear the great footsteps of the city, and no longer to hear your footsteps or God’s, or my own. Goodnight.

Yannis Ritsos, Moonlight Sonata, Athens, June 1956
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Rene van der Velde
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to Katerina and Panagiotis,
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INTRODUCTION

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“I see a landscape as a question and an invitation. In this border zone between heaven and earth we try to find our way and tell stories to colour our lives and to give them meaning.”

Andrei Tarkovsky
The initial reason of the sheltering of a community, which is developed in what we nowadays call a city, was the proximity to the natural resources such as the water and the quality of soil and the geomorphological relief and etc. The contemporary city seems to lack of a positive relation between the urban context and the natural landscape in which urban areas and natural landscape interact giving importance and meaning to each other. The quiet new field of landscape architecture stands to the border line between them. The transition moment between the urban and the natural environment creates different edges in the city which construct the image of the whole city.

This thesis questions how these edges of the city could be transformed as to create an urban narrative of the spirit of the places and a dialogue of the city and the natural resources. It would be a dialogue within the reshaping of the urban context and specifically the reshaping of the city edges. The spirit of the place, the historical context and the existent natural characteristics are the elements that are involved to this thesis in order to answer with a design approach, the research question of this thesis.
ABSTRACT

A city appears as the palimpsest of different ages through its building environment. The urban landscape which is in a continuous process, is constructed by the road system, pavements, open public spaces and buildings. On the other side the natural landscape appears with two different ways in that system: as entropic holes of different scales in the densed urban grid and as a belt that surrounds the urban and suburban areas. Both of the situations create different kind of edges in the city which are developed in plan and section.

In the contemporary city this kind of edges reveals a contrast between the natural landscape and the human interventions. We could find different typologies of edges in the city. The focal point of this thesis is about the edges which reveals a strong conflict between the natural ground and the post-industrial remains of the city. It is about two different layers of time which are interact creating the new urban ground. We present these edges in a continuous entropic situation.

In that context this thesis introduces the above ideas on the urban contemporary landscape, with the case study of the city of Bratislava in Slovakia. The proposed site of the thesis is two edges in the city: the riverfront of Danube and the motor way D2 which connects the Czech border at Kuty with the Hungarian border at Cunovo, passing through Malacky, Bratislava and Jarovce. The chosen edges are developed along two main axis (Danube and motorway) which are intersect and reveals different identities of the site. The two axis have two common characteristics: a road system which is an outcome of the industrial period of time of Bratislava, is prevalent and forms the urban ground and a river system that creates a natural ground.

Therefore road and river flow are the elements that this thesis is concentrated to create new public spaces and a further expansion of the city of Bratislava. An intervention along these axis aims to the reestablishment of the relation between the city, Danube and Carpathians. Characteristics such as the spirit of the place- genius locus, the entropic situation of the site, the memory, the history and the water ecology are the main issues that this thesis aims to deal with in different extent and scale.

The main question of the thesis is how the design of the landscape in an axis could lead to the creation of an urban narration with main elements the urban and the natural fabric which are constructed by the medieval historical center of Bratislava and Danube and Carpathians.
“This relation between craft and motivation, the how and the why, is the forgotten rule of theory. Originally, art and architecture were understood as a unity between techne and poiesis. Here, techne was the dimension of revelatory knowledge about the world, and poiesis was the dimension of creative, symbolic representation.”

Jeams Corner [1990:19]
This thesis proposes a design methodological approach through scales. The analysis of the region and the thematic conceptual ideas are developed through different scales. Therefore the main thematic areas that are proposed, are implemented from the small scale which is concentrated to the definition of a strategy plan and ends to the creation of design in a local scale. The aim of this design thesis is the production of new kinds of public spaces all along two major edges of the city of Bratislava. The spatial elements that this thesis works on, are the water and the road infrastructure. The element of the water takes the form of a stream and a river flow. The road infrastructure is about a motorway which is above the ground in a big part and its structure took the place of an old river stream and a highway which is located in front of the river Danube.

The main thematic ideas that this thesis deals with, are the memory of the place, the historical development with the main transition moments and the water ecology of the stream and the river. These themes are about the idea of a site-specific approach which is developed through a main diagram of Lida Diedrich. The main thematic concepts that are derived by the above themes, are: the patchwork, the recovering and the recollection.

a. The patchwork is used as a structure which implies that different pieces of forms, functions and structures are linked together creating a new ground. Therefore, from a spatial point of view different functions (existent and proposed) create a new ground for new public spaces in the city along these two selected edges.

b. The recovering is a term which indicated the rehabilitation process that my design proposal involves. The two edges are post-industrial sites with fragmented functions and without any cohesion. The recovering is a word that is referred to the recovering of the natural landscape and also, the recovering of the urban tissue.

c. The recollection is a thematic concept that works through time and is referred to the idea of the recollection of different elements, relations of the past.

In that context, these ideas end to the creation of an urban narration which aims to the reestablishment of the relation between the City, Danube and Carpathians.

/site thinking
//a priori ideas, general and proper to every discipline or designer “reading”

///parameters for evaluating site-specificity
1. physical structures, materials
2. flux processes, practises
3. immaterial memories, atmospheres, narratives

/thinking about the site
//topical ideas
///specific to the plot of land with its various conditions “editing/ writing”
parameters for evaluating transformation intervention, appropriation, connectivity

[Lida Diedrich]
The dynamic landscape: The role of the cultural and time processes as a methodological approach towards the landscape architectural design

Tutor: Steffen Nijhuis
Introduction
George Simmel recognises and describes a cultural change on the way that contemporary societies perceived the elements of their structures: “The individualization of the internal and external forms of human existence, the dissolution of primordial ligatures into differentiated and self-contained entities constitutes the grand formula of the post-medieval world. This formula also resulted in our coming to recognize landscape within the realm of nature. It is no surprise that, in Antiquity and the Middle Ages, there was no awareness of landscape, since this object as such had not yet come into being with that inner resoluteness and with its self-contained contours, which eventually came to be confirmed by the rise of landscape painting that, as it were, capitalized on this gain.” (Simmel, 1913: 22)

He analyses this observation in his article «Philosophy of the Landscape». The observations that are analysed at this article, are essential components and characteristics of the landscape as a cultural presentation of the natural world. This is an essential step towards the definition of landscape as a perception of individual units in nature and leads to its detachment by nature. Landscape is not nature. Its detachment transforms it to an independent unit. Arts such as painting and poetry, are the fields that express and represent the landscape for first time. Moreover, a second observation about the notion of the landscape is the fact that different processes are the components that construct a landscape. Therefore, the landscape is a continuous changeable environment. According to Simmel and his essay «Philosophy of the Landscape» a landscape exists in the case that “… our consciousness has to acquire a wholeness, a unity, over and above its component elements, without being tied to their specificity or mechanistically composed of them.” (Simmel, 1913: 21) The notion of nature and unity is essential to understand the landscape. According to Simmel “by nature we mean the infinite interconnectedness of objects, the uninterrupted creation and destruction of forms, the flowing unity of an event that finds expression in the continuity of temporal and spatial existence.” (Simmel, 1913: 26).

The observations that are analysed at this article, are essential components and characteristics of the landscape as a cultural presentation of the natural world. Therefore these observations give value also in the landscape architecture as a domain which is created by the start point of the recognition of the landscape. In my opinion Simmel’s analysis offers two perspectives: the one is about a better understanding of nature and the other concerns the role of the architecture in the landscape. As far as architecture is considered it redefines the relation between people and nature. It is the field that reconstructs the image of nature and the landscape. The architecture results sometimes in the contradiction between people and nature or the connection of them. This is the moment that landscape architecture comes to existence as an option and also, a new scientific and academic field.

The landscape as a separated cultural unity which is in a continuous process is the subject of this essay and my methodology approach. My analytical method identifies two different aspects of process: the cultural and the time aspect which create the dynamic character of the landscape. The main research question towards the establishment of a method, is how the above observations could become a design tool and how their literary character could be transformed into space.

In my opinion this subject is essential in the landscape architecture as it is a domain which concerns cultural implementations on the natural world. Nature and culture are two notions
which are inseparable of the idea of the process. Therefore, the establishment of a method which could describe different elements of that expression is essential. My research aim is to establish a method which could lead to the design expression of the dynamic character of the landscape. The time and the culture as elements of the dynamic character of the landscape are analysed through two examples and aims to indicate design solutions or results that express this idea through a theoretical position.

My research at this topic is based on different resources. I analyse two theoretical and design examples which express these two different processes that I describe above. I select the theoretical ideas of Lawrence Halpin about the RSVP Cycles and Robert Smithson about the dialectical landscape to establish my methodological approach. I make this selection as Lawrence Halpin and Robert Smithson’s theoretical and design work are among the founders of the landscape architecture as a new scientific field. Therefore, I believe that their work directly express the idea of the dynamic landscape from the start point of the landscape architecture. On the one hand Lawrence Halpin introduce a unique representation way of the time processes in the landscape. On the other hand Robert Smithson is one of the founders of the landscape art which concerns the representation of cultural characteristics on the natural ground and not anymore on the canvas. Furthermore their design expressions concern the public realm and this fact is essential for my method as my final design concerns public interventions in the city context.
Example I  the time as a dynamic parameter of the landscape

The first example of a research methodology is the introduction of the RSVP Cycles of Lawrence Halpin. He names them as:

- **Resources:** which are what you have to work with. These include human and physical resources and their motivation and aims.
- **Scores:** which describe the process leading to the performance
- **Valuation:** which analyses the results of action and possible selectivity and decisions. The term valuation is one coined to suggest the action-oriented as well as the decision-oriented aspects of v in the cycle.
- **Performance:** which is the resultant of scores and is the style if the process.

He points out that this cycle operates in any direction and by any overlapping. This diagram aims to the creation of a score. Basic inspiration of this expression is the music score which reveals the process of a melody step by step. In the same way the scores which are produced by the diagram, aim to reveal the changeable character of a domain. The scores are created as a relation of two representation systems that Halpin introduces: the symbols and the grid that the symbols are classified. He creates different groups of symbols.

In that context it is interesting the reference on the ecoscore and the motation scores (movement notations) that Halpin explains on the book «The RSVP Cycles: Creative Processes in the Human Environment». The ecoscore refers to the natural landscape as a system which is constructed step by step. An example is a river which is meandering through landscape creating different signs in the natural ground. In the same way “motation is one way of scoring movement. There are others. What is perhaps most significant is that it is a conception that environments and people can be scored together in a choreography of motion” (Halpin, 1969: 71).

It is clear that the introduction of these scores and RSVP cycles is important as it presents the narrative character of a natural or man-made landscape. The landscape is revealed through time as a continuous process. Moreover he produces a representation way of this motion. Therefore, on the one hand he reveals the dynamic character of the landscape and on the other hand he produces the scores which represent the process through time with a graphical and abstract way. He makes use of these scores to establish the main design principles for his work.

A characteristic example of his design approach is the Lovejoy Plaza and Cascade in Portland. The main idea of the design of the square is the characteristics of the waterfalls in the High Sierra. He study the different effects of flow, rhythm, sound and light that are created by the waterfalls. He created different kind of scores that are based on the observations on these effects which are resulted in the final design of the square. He describes: “the open-ended element remains the people for whom the plaza fountain was designed. The fountain, once built, became, itself, a score for movement. The performance (p) was not an end but a beginning in the cycle again. Though the environment itself is visually exciting it was conceived as a place for involvement, for physical interaction in which the constructed elements were there to encourage physical and emotional participation by the people of Portland.” (Halpin, 1969: 58)
Example II  the culture as a dynamic parameter of the landscape

The second example of my research methodology is about the dialectical landscape as it is explained by Robert Smithson. It is essential in that stage to refer an article by Rosalind Krauss who in my opinion, analyses the land art practices of 1960 and 1970. The text and the way of thinking of Robert Smithson are part of the art movement of that period of time. So it helps to obtain a better understanding on what Smithson tries to suggest.

In the essay «Sculpture in the Expanded Field» Krauss describes the notion of the expanded field focusing on the land art practices of the second half of 1960 and 1970. Krauss does not aim to analyse the field of architecture or sculpture but she describes the leftover of these two categories and this is a crucial part for the contemporary approaches. That period of time artists experiment with a new kind of art in which environment and artwork are not separated unities. Krauss connects the new artistic approach with the scheme of architecture- not architecture and landscape- not landscape. These schemes define the expanded field of that artistic approach as: the traditional sculpture is in between of not-architecture and not-landscape, the artists of the expanded field aim to intersect the architecture, the land and the landscape with the observers and the environment. In accordance with Krauss the connection of architecture and not-architecture creates the axiomatic structures (installations).

Namely, they are interventions of new environments in existing structure. In that artistic way people are not observers of the landscape but they are in it and interact with it. The essential aspect of this approach is that artists aim to create a landscape through time which exists through the social interaction- a dialectic landscape as Smithson explains.

Robert Smithson analyses his perception of the landscape in his article «Fredrick Law Olmsted and the dialectical Landscape». He describes the design of the Central Park and also, the way that he perceives this environment. Furthermore, he makes a comparison between the design of the Central Park and the design of one of his projects, the «the Spiral Jetty». He refers to these two examples assuming that “both of them are sites that have been disrupted by industry, reckless urbanization, or nature’s own devastation.” (Smithson, 1973: 165) All his analysis is under the perception of the dialectical character of the landscape.

As far as the Central Park is considered, Smithson underlines the essential historical background of the park plot, as it used to be a dump for the city. Olmsted is influenced by the design principles of Uvedale Price and William Giplin upon the idea of picturesque, as they are analyzed at the treatises «Essay on the Picturesque, As Compared With The Sublime and The Beautiful» and «Observations relative chiefly to Picturesque Beauty». As a result, he aims to design an artificial landscape in the centre of a metropolis.

One of the main reasons of the appearance of the picturesque as an aesthetic idea is the change that occurs at 18th century, from the design of formal Italian gardens to a more natural feeling of the ephemeral landscape. We could describe the image of a tree which is stricken by a thunder or a cleft in the ground which is repaired by the pass of time, as picturesque. The contrasts of the picturesque are related by a “static formalistic perception of the nature.” Smithson contrasts this perception with his opinion that a park is
a "process of relations in a natural region", and not anymore "a-thing-in-itself". Smithson highlights that the park is a unity in continuous changing process, transformation and reshaping. The factor of time and the random essence are parameters which intervene at the landscape of the park and change the solidified perception of the park that New York citizens have. Smithson firmly believes that the land art artists can reveal the right perception of nature via their art.

Robert Smithson puts into practice his thoughts about nature and art at the land art project «Spiral Jetty» which is an intervention to the natural environment of the lake Great Salt Lake. The region is an abandoned industrial area/ salt-marsh in the region Utah. He explains that reading the book «Vanishing Trails of Atacama» which describes the salt-marshes and all the stages of their draining in Bolivia, is the aspiration of this project. The red color which is a reference to the salt-marshes and the different tones of the materials around the lake spark his interest, so he ended working on the Great Salt lake in Utah. When he started meandering in the region, he did not know the final form of his project. He writes: "I would let the site determine what I would build". He observes thoroughly the region and studies books about the subject and the region. He tries to correlate the elements that take from the region and the forms that think about:

“This site gave evidence of a succession of man-made systems mired in abandoned hopes”

“As I looked it reverberated out to the horizons only to suggest an immobile cyclone while flickering light made the entire landscape appear to quake.”

“This site was a rotary that enclosed itself in an immense roundness. From that gyrating space emerged the possibility of the Spiral Jetty. "(Smithson, 1996)

All the study of the subject concludes to the creation of a spiral jetty. The material of the jetty is stones and the duration of the construction is six days with the help of machines like trucks, tractors and loaders. He records the procedure of the construction by video. He works out the video with the addition of his thoughts. The result of this process is a series of illustrated images. In these final images we find: photos of the Museum of Natural History, historical photos of New York, the video of the construction process, bird-eye view photos of the construction and other photos of the construction from different spots in the region around the project.

His interconnections and described associations of the project aim and achieve to broaden the project’ range. It is not only a simple land art project but rather a broad project to different fields: (a) the essay about the jetty, (b) the construction of the jetty, (c) the video of the procedure and (d) the directions for somebody to visit the region of the jetty.

According to Smithson, the landscape is an entity in which his land art projects participate. His land art work- jetty is constantly changing because of the passing of time as it appears or disappears in the water surface. Its shape is in continuous relationship with the water level. The jetty interacts with the salt of the lake, the light of the sun and the weather- climate changes. In the process of the jetty project, he is wondering for his position to this: “was I but a shadow in a plastic bubble hovering in a place outside mind and body?” (Smithson, 1996) The issue of scale which is a really essential element at Smithson’s work appears to be subjective and multiple as it refers the jetty itself and the relationship of the jetty and the visitors.
He tries to organize the different elements and components of the project:

A scale of centers:

a. A source of ions in a spiral
b. A core
c. An articulation point
d. A wooden pile in the mad
e. A pivot of the air-propeller
f. The channel of the James Joyce ear
g. The sun
h. The whole at a spool of film

The land art project is open to visitors in order to interplay with it, see it or walk on it.
Reflection on the examples

The analysis of the two examples above, give us the insight to create a specific methodological approach which is based on them. On the one hand, Lawrence Halpin introduces the time as an element which poses the landscape as a dynamic field and presents in the same time a way of representation of it. It is clear that the introduction of these scores and RSVP cycles is important as it presents the narrative character of a natural or man-made landscape. The landscape is revealed through time as a continuous process. Moreover he produces a representation way of this flow. Therefore, he reveals the dynamic character of the landscape and he produces the scores which represent the process through time with a graphical and abstract way.

Moreover, he implements these scores on the designing of the Lovejoy Plaza and Cascade, producing an interactive public space which is based on the study of a natural environment. Therefore, he transforms the effects that observes in the natural environment of the waterfalls and introduces them in the city context. The design principle which could we noticed is the transformation of the natural ground of a waterfall into a concrete urban ground which permits the water and sound flow of a waterfall. The result is an artificial waterfall landscape. A new urban ground which becomes the canvas for social interaction.

On the other hand, Robert Smithson introduces the cultural aspect as a parameter of a dynamic landscape. If we perceive his writing with a more abstract way of thinking, he propose a research attitude which involves the historical background of a place, the identity of the place- the genius locus and the continuous change of the natural characteristics. These three aspects could influence the design process.

The significance of the dialectical landscape is not so much about the time parameter as it is about the cultural parameter which generates the landscape and creates a dynamic situation of it and the society.

The case study of the spiral jetty reveals the way that the form and the characteristics of it are influenced by the spirit of the place, resulting in an artificial form which becomes a part of the natural landscape. The design principle that we could draw from this approach is the fact that natural materials (stone) could form a reminder of a past human activity on this region and in the end, they form together a new interactive field.

As far as the presentation means of the two examples are considered, Halpin introduces the scores. With a critical eye on the Halpin’s work we could notice that the scores express the motion of the landscape in a so abstract way that it is not so easy to understand them. On the other hand, Smithson underlines the interactive character of a landscape project with cultural point of view. He uses photos, videos as a mean of representation of his notes which is a more understandable way of presenting an idea. Moreover, Smithson records all the procedure of the building of the spiral jetty as he recognises it an internal part of the final design.
Methodology | towards a dynamic landscape

The theoretical ideas and the design outcomes of Lawrence Halpin and Robert Smithson consist the basis of my methodology. The steps that my methodology suggests are:

- The analysis of the cultural characteristics of a region through time
- The establishment of the main idea in accordance with the analysis with specific attention to the geomorphological relief and the functions of the region.
- The test of the idea through time and with different social interactions. Namely, how the main idea could function in time process and with different cultural activities.
- The designing with main aim the connection between the natural characteristics, the cultural context as to produce a new public space.

Design principles:

a. transformation of the natural ground to an artificial ground.

b. the creation of a structure that involves the natural flows of light, sound, color etc.

c. the past functions as elements of the definition of the new form.

- The representation of the designing as a dynamic-expanded field of cultural and time processes. The elements of flow, motion and time process are the characteristics of the presentation of the new public space.

Conclusion

The article by George Simmel about the notion of the landscape as a separated unity underlines the changeable character. The meaning of the process is an inseparable part of the nature and thus, it is also of the landscape. The landscape architecture as a scientific field owes to deal with the different processes that are created by the design or they are part of the spirit-genius locus of the region. In that point Lawrence Halpin and Robert Smithson research on this basis. In both examples the cultural and the time process are interrelated as two different flows that create the final design.

In the case of the lovejoy plaza, the result is an artificial waterfall which becomes a new public ground for the public realm. Therefore, a natural construction (waterfall) which is combined with different natural effects and processes, is transformed and be placed to the urban context. As a result the connection between the culture (city) and nature (waterfall) create a public space revealing the process of time as the waterfall is a phenomenon which is developed through time.

In the case of Robert Smithson, the spiral jetty express the form of the old salt marches which is a cultural implementation on the natural landscape. The natural materials of the spiral jetty and the strong interaction with the water transforms the jetty to a natural element (like a valley, mountain). The cultural processes of the region are transform to a new natural surface.

If cultural and time processes consists two different layers that coexist in a region. Then landscape design owe to work on them and create a space that works as a link between these two processes.
Broad research question

[1]
We could trace two types of city forms in the ancient world, the city as a natural-in process development and the city which is based on the Hippodamian plan. With the first growth of urban populations in ancient Mesopotamia, the symbiotic relations that originally held between village and land were not greatly altered. «The city», as Childe describes its earliest manifestations, is girt with a brick wall and a fosse, within the shelter of which man found for the first time a world of his own, relatively secure from the immediate pressure of raw, external nature. It stands out in an artificial landscape of gardens, fields, and pastures, created out of reed swamp and desert by the collective activity of preceding generations in building dykes and digging canals»

The first factor for the development of shelters (village, city) is the natural characteristics, the proximity to the water, the soil, the climate, the geomorphological relief. We could trace different use of the natural characteristics like the land for food production, the relief for protection against the enemies and the plants for medical purposes.

[2]
The industrial revolution creates a totally new perception of the life. The structure of the society is changed and the attitude of the people towards nature. More and more people leave the agrarian way of life and go to the city centres for a better life. This flow creates different situations such as the enormous expansion of the city centres, the change of the agricultural production and the desolation of the villages.

[3]
The transformation of the contemporary city and the intervention on it express a return to the past. New open spaces, parks and green paths are emerged to the environment of the contemporary city. The landscape architecture is a quiet new domain which is prevalent nowadays. There are new notions as urban agriculture and city as an eco-system. Therefore the main question is how the contemporary society and the model of the sprawling city which is the model that express the expansion of the contemporary city, is connected with the natural landscape and the natural resources.
early civilizations of Mesopotamia

first garden pattern in Egypt

masterplan of Athens

epidauros | Athens

akropolis | Athens

central park | New York

railroads

factory

park de la Villette | Bernard Tschumi

fresh kills park | the field operations

eco village

garden city as a suburb of the city

eco village

masterplan of Athens

epidauros | Athens

akropolis | Athens

central park | New York

garden city as a suburb of the city
Site specific question

In the contemporary city, the edges reveal a strange relation between the urban developments and the natural landscape. It is crucial in that moment to refer an interesting opinion by Robert Smithson about the post-industrial landscape and the entropic situation. Robert Smithson connects the way that we perceive the landscape with the second law of thermodynamics - the entropy. In accordance with that every change produces an uncontrolled sum of energy which is not used. Entropy is the loss of the energy which is the surplus and the remnant.

Therefore, an understanding of the landscape as a sum of energy, focuses to the entropic situation in which the future elements of the landscape are adapted and become part of it. Smithson refers to an expression of Nabokov who says that the future is the obsolete in reverse. "Instead of causing us to remember the past like the old monuments, the new monuments seem to cause us to forget the future. Instead of being made of natural materials, such as marble, granite, plastic, chrome, and electric light. They are not built for the ages, but rather against the ages. They are involved in a systematic reduction of time down to fractions of seconds, rather than in representing the long spaces of centuries. Both past and future are placed into an objective present". (Smithson, 1966)

In that context, phenomena which are referred to the landscape, could be named as entropic as they connect the geological time with the transformations of the post-industrial landscape. The entropic character of the landscape becomes obvious at the peripheral zones and the abandoned industrial areas consisting a new kind of archeology. "The slurbs, urban sprawl and the infinite number of housing development of the postwar boom have contributed to the architecture of entropy.....Near the super highways surrounding the city, we find the discount centers and cut-rate stores with their sterile facades. On the inside if such places and maze-like counters with piles of neatly stacked merchandise, rank on rank it goes into a consumer oblivion". (Smithson, 1966)

Robert Smithson is part of the first land art researchers and belong of the team of the "expanded field" artistic practices. They started to be interested to study about the new architectural forms of the junk spaces which are a result of the emerging complexity of the sprawling city. All the blighted areas reveal a new entropic geology and topography which consist a new type of reverse ruin: it is not the ruin which is formed with the pass of the time but it is the ruin that is part of every process of change of the landscape. Walter Benjamin writes about the role of the ruins in the urban context at the Passagenwerk as indicators of the memory in the city. In that context Robert Smithson writes about the reverse ruin of the post-modern city. The reverse ruin is not part of the ecological movements of the contemporary city but refers more to seeing city as a narration and a total of transition moments.

This thesis names these peripheral zones in the city, edges that reveal a strange relation between the urban and the natural landscape. These edges are the main design subject of the thesis as they consists crucial moments for the sprawling city. These edges which in the most of the cases are transition spaces without any kind of use of design and they are junk spaces in the contemporary city. The design of them is essential for the future expansion of the city and an interesting research on the field of the landscape architecture. Spaces like the highways, are edges in the city which creates an entropic situation and the reverse ruin that Robert Smithson talks about. The site specific question is how we could redesign these edges in order to create a new flow and not a border between urban and natural landscape.
The design approach

This theses begins with the main research question which is about the reestablishment of the relation between the urban context and the natural resources. The case study of this question is Bratislava and especially the edges that exist. The thesis is concentrated at two focal edges of the city: the river front to Danube and the motorway D2 which was an old river which has transformed into motorway.

The aim of the thesis is the proposal of a future development in different scales which will improve the existed situation of Bratislava and also, involve the start point for the future development of the city.
introduction to the city | Bratislava
PART A
scale A

introduction to the city | Bratislava
“Arriving at each new city, the traveler finds again a past of his that he did not know he had: the foreignness of what you no longer are or no longer possess lies in wait for you in foreign, unpossessed places.”

Italo Calvino | Invisible Cities
The city had been developed because of it and around it as Danube is the chief transportation route to other areas. The river passes through the city from the west of the south-east. The middle Danube basin begins at Devin Gate in western Bratislava. Other rivers are the Morava River, which forms the north-western border of the city and enters the Danube at Devin, the little Danube and the Vydrica which enters the Danube in the borough of Karlova ves. The carpathians mountain range begins in the city territory with the little Capathians. The city’s lowest pint is at the Danube’s surface at 126 metres above the sea level and the highest point is Devinska Kobyla at 514 metres.

The intersection of Carpathians and Danube is the main characteristic of the reason and the way that the city is expanded. This thesis is concentrated to this characteristic and the research aims to the reveal of the lost relation between the City, Danube and Carpathians. Therefore, the first layer of our design approach consists the natural landscape which is constructed by the bleu and the green flow.

**General characteristics**

Bratislava is the capital city of Slovakia with population of about 420,000. Bratislava is in southwestern part of Slovakia, occupying both banks of the Danube River and the left bank of the Morava River. Its location is in the borders between Austria, Hungary and Slovakia. It is the only national capital that borders two independent countries. Bratislava is the political, cultural and economic center of Slovakia. It is between two capital cities: Vienna and Budapest which is a fact that makes Bratislava a point of tourism among these capital cities. It is only 62 kilometres form the border with the Czech Republic and only 60 kilometres from the Austrian capital Vienna.

**Geography**

Its area is 367.58 square kilometres and it is the second-largest city in Slovakia. Bratislava is located at the intersection of Danube and Carpathians. It has a riverfront to Danube River which is one of the main geomorphological characteristics of the city.
map of geography of the region
area: 49.035 km$^2$

population: 5,410,836

density 111/km$^2$
historical analysis of the relation between city, danube, carpathians
From a spatial point of view, Bratislava is a mono core late post-soviet city. The majority of the population is located at the city core and the different residential nodes are depended and connected with the city center. The historical city center is a medieval town which is surrounded by modern buildings.

As far as the size and the density of the city is considered, Bratislava is a small city that somebody could experience it through walking and has low density. The majority of the people commutes with public transportation at a large extent. The statistic analysis indicates a decrease of the people that want to live in the city center of Bratislava and a flow to the suburbs of it.

Social context of the city

Historically, Pressburg, Pozsony or Presporok (old names of Bratislava in German, Hungarian and Slovak, respectively) was one of the most significant cities of the Hungarian Kingdom, and later the Austro-Hungarian Empire; it was the royal city of Hungarian monarchs, and the centre of trades, arts and education. For centuries, it was a multietnic and multilingual city: a mixing pot of various ethnic groups and nations living and talking together in Slovak, German, Hungarian, Yiddish and the ‘Pressburgian Mishmash’ (a mixture of all these languages). Several political changes in the 20th century (with historic milestones almost every twenty years – 1918, 1938, 1948, 1968, and 1989) had a major impact on the ethnic and social composition of the urban population. Until 1948, in each political regime a different ethnic group was in power and a different ethnic composition existed. This changed after the Second World War and after the Communist coup in 1948. The city lost most of its Jewish population in the Holocaust, and the majority of German and Hungarian inhabitants were deported (or moved) after the liberation.

The historically multicultural character of Bratislava was rapidly disappearing. Nowadays, the city is a blend of medieval and soviet elements which contradict each other. This fact is obvious by the grid system, the buildings and the landmarks.

It is essential to underline the fact that Bratislava becomes official capital of Slovakia at 1993. This fact means that its unstable situation until 1993, lead to deterioration of its future development and an uncontrolled urban development which was depended by the different political regimes.
changes of the borders of Slovakia

fragile political situation. Bratislava as a blend of cultures
400-500 BC
- an important Celtic town - “Oppidum” was established at the current territory of Bratislava city, Slovakia.

1st -5th c
- today’s Bratislava is known as “Limes Romanum” - fortified border of Roman Empire. Bratislava Castle and Devin Castle became important centers during the Great Moravia (“Velka Morava”) empire.

833-10th c
- territory of Great Moravia (Moravia Magna in Latin).
- Bratislava is a port of Hungary, later Austria.

1000
- Bratislava receives town privileges

1291
- Bratislava becomes “free royal town”.

1405
- Bratislava becomes a seat of important university Academia Istropolitana (Universitas Istrapolitana) founded by Matthias Corvinus.

1536-1784
- Bratislava is the capital of Hungary.
- Bratislava is a important place of Slovak national and cultural movement, firstly led by writer Anton Bernolak, later by leader of Slovak national movement Ludovit Stur.

1840
- first railway in Hungary is built and connects Bratislava with Svaty Jur. This is shortly followed by train connection to Vienna (1848) and Budapest (1850). During the late 19th century Bratislava is heavily modernized and industrialized.

1868
- Bratislava becomes a part of Czechoslovakia.

1918
- the name “Bratislava” becomes the official name of the city. In 1919 Slovak Comenius University (“Univerzita Komenskeho”) is founded. During years of World War II Bratislava becomes the capital of puppet fascist Slovak State directed by Germany.

1968
- Bratislava becomes the official capital of Slovak Socialist Republic.

1989
- communist regime is overthrown in peaceful Velvet revolution and Bratislava is the capital of Czechoslovak Federative Republic.

1993
- Slovakia becomes independent state after the Czechoslovakia splits and Bratislava is the capital.
arerial photos of scale and dense comparison between European cities
diagram of comparison between the main European cities transportation means

Bratislava is based on the public transportation
The economy of the city

Bratislava gained a growth impulse of enormous importance in the year 1993 after the federation was divided. The city was suddenly set a hierarchy level higher among other state capitals. From this point, the area has been several times assigned as one of the most perspective emerging economic zones in Europe. But a surprising low level of activity, except the expected services growth and investment attraction in the most profitable fields of the new-created market infrastructure, stayed very stable, at least until the late 1990s. A problematic socio-political climate and international reputation of the country was abandoned. For the capital, the whole 1990s and the final redirection towards the EU entered half-decade later meant, that a full-scale urban development, even delayed, can be set in motion.

The fact that in 2006, the region of Bratislava increased its share of the economic aggregate of Slovakia in comparison with 1997 up to 7.07% reflects the lawful conditions economic development in Bratislava during this period. Increasing the share of 7.07% over 10 years, from 20.51% to 27.58% is really huge.

In a spatial interpretation of the economical situation of the city, it is obvious that the historical old core and the city center are the regions that there are developments that lead to an economical sustainability for the city. [map.01]
diagram 1: Cyclic expression of the complex urban structure with internal interactions between material (physiographic, morphological) and social (social-demographic, functional) urban sunstructures

Selected long-term societal and economic trends in Bratislava: share of agricultural (I), manufacturing (II) and service (III) sector per 100 employees (right axis); population dynamics in the core city (C) and the suburban ring (R) of the FUR as total change per 1,000 inhabitants (left axis), 1970-2005

The diagram compares the main European cities in terms of the share of population living in core cities and kernels (larger urban zone= 100%) and the share of area of core cities and kernels (larger urban zone= 100%).

Bratislava is highlighted as a mono-core city. The diagram shows the comparison between core city, kernel, and larger urban zone for various cities across Europe.

Source: Eurostat.

Source: Bratislava Statistical Office.
Disposable income of private households per inhabitant

<table>
<thead>
<tr>
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<tr>
<td>Agriculture, forestry, fishing (A+B)</td>
<td>5 505</td>
<td>1 762</td>
<td>1 584</td>
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<tr>
<td>number</td>
<td>26.45%</td>
<td>15.89%</td>
<td>13.29%</td>
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<tr>
<td>Manufacturing (C+D+E)</td>
<td>73 818</td>
<td>48 827</td>
<td>47 109</td>
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<td>Construction (F)</td>
<td>46 548</td>
<td>24 513</td>
<td>18 397</td>
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<tr>
<td>number</td>
<td>16.68%</td>
<td>7.98%</td>
<td>5.19%</td>
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<td>Production activities total</td>
<td>125 871</td>
<td>75 102</td>
<td>67 090</td>
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<td>number</td>
<td>45.1%</td>
<td>24.44%</td>
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<td>Wholesale and retail trade (G)</td>
<td>31 103</td>
<td>56 105</td>
<td>71 147</td>
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<td>number</td>
<td>11.14%</td>
<td>18.26%</td>
<td>20.08%</td>
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<td>Hotels and restaurants (H)</td>
<td>4 218</td>
<td>6 361</td>
<td>7 950</td>
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<tr>
<td>number</td>
<td>1.51%</td>
<td>2.07%</td>
<td>2.24%</td>
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<td>Transport, storage, communication (I)</td>
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<td>31 041</td>
<td>29 628</td>
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<tr>
<td>number</td>
<td>8.92%</td>
<td>10.1%</td>
<td>8.36%</td>
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<td>Financial intermediation (J)</td>
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<td>13 900</td>
<td>18 452</td>
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<td>number</td>
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<td>4.52%</td>
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<td>47 682</td>
<td>67 187</td>
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<tr>
<td>number</td>
<td>9.46%</td>
<td>15.52%</td>
<td>18.96%</td>
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<tr>
<td>Public administration, social security (L)</td>
<td>9 851</td>
<td>18 174</td>
<td>32 253</td>
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<td>number</td>
<td>3.53%</td>
<td>5.91%</td>
<td>9.1%</td>
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<td>Education (M)</td>
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<td>22 105</td>
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<td>number</td>
<td>8.52%</td>
<td>8.04%</td>
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<td>Health and social work (N)</td>
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<td>17 559</td>
<td>20 073</td>
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<td>number</td>
<td>5.4%</td>
<td>5.71%</td>
<td>5.66%</td>
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<td>Other community, social services (O)</td>
<td>15 966</td>
<td>16 629</td>
<td>18 487</td>
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<td>number</td>
<td>5.72%</td>
<td>5.41%</td>
<td>5.22%</td>
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<td>Non-production activities total</td>
<td>153 251</td>
<td>232 156</td>
<td>287 282</td>
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<tr>
<td>number</td>
<td>54.9%</td>
<td>75.56%</td>
<td>81.07%</td>
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<tr>
<td>Economic activities total</td>
<td>279 122</td>
<td>307 258</td>
<td>354 372</td>
</tr>
<tr>
<td>number</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


Bratislava in a middle-low economic standard, its economy is based on non-production activities.
The river front has low population density and low economic burden.
The festival motion is concentrated only in the historical core.

Lack of festival areas in the river front.

Source: Eurostat.

August-September

Kolos Green Site Tour 2012
This cycling marathon through the picturesque valleys of the Small Carpathians is celebrated each year.

LUCY Master Days
The streets of Bratislava's pedestrian zone come alive during this festival of traditional crafts, production and folk art.

Dance Fest
This quality festival on Bratislava's waterfront offers dance performances from the country throughout the river basin.

Convergence Festival
A number of new features in the program will be featured in the 15th year of the festival, and will include a program of interest solo instruments and soloists, who will come together at the end of the festival for a large "converging" chamber music concert.

St. Katherine's Testing 2013
This festival of young Slovak wines in the heart of Bratislava takes place on Primavera Island.
The tourism motion is concentrated only in the historical core riverfront as a touristic entrance highway as a touristic entrance

touristic flow| Slovakia, Bratislava
accomodation| Slovakia, Bratislava
**main educational institution in Bratislava**

**Slovak University of Technology in Bratislava | 1938**
- Faculty of Construction Engineering
- Faculty of Mechanical and Electrical Engineering
- Faculty of Chemical Engineering
- Faculty of Specialised Sciences
- Faculty of Architecture and Construction Engineering

Students in full-time study: about 16,300
Students in part-time study: about 1000
Total number of students: about 17,300

**Comenius University**
- Faculty of Medicine
- Law Faculty
- Faculty of Philosophy
- Faculty of Natural Sciences
- Faculty of Education
- Faculty of Pharmacy
- Faculty of Physical Education and Sports
- Faculty of Mathematics, Physics and Informatics
- Roman Catholic Faculty of Theology
- Evangelical Faculty of Theology
- Faculty of Management
- Faculty of Social and Economic Sciences

Students in full-time study: about 21,500
Students in part-time study: about 5300
Total number of students: about 26,800

**University of Economics in Bratislava**
- Faculty of National Economy
- Faculty of Business Management
- Faculty of Commerce
- Faculty of Informatics
- Faculty of International Relations
- Faculty of Applied Languages

Students in full-time study: about 10,000
Students in part-time study: about 2500
Total number of students: about 12,500

**Academy of Fine Arts and Design**
- Academy of Performing Arts
- Faculty of Theatre

Students in full-time study: about 1045
Students in part-time study: 60
Total number of students: about 1105

**Police Academy**

**Slovak Medical University**
- Faculty of Nursing and Health Professional Studies
- Faculty of Public Health

**School of Medicine**
- Students in full-time study: about 1000
- Students in part-time study: 1500
- Total number of students: about 2500

---

**student population in comparison to Bratislava's population**

471,061 citizens
60.65 students

Sources: Eurostat.
To sum up, the contemporary market principles have created a new reality for Bratislava. Many large companies are moving there and this fact indicates that Bratislava belongs to one of the most dynamic emerging European territories. The socialistic past of the city is obvious in different cases. Steinfuhrer and Haase note that the post-socialism has brought rather fragmented contradictory developments in both physical and social structure. Their question of how the heritage will develop remains open-ended, with western concepts of urban change and demographics depending on specific context.

“Postcommunist city is in practice a range of urban places after political and economic experiment whose dramatic impacts will be evident for many years to come.” (Boren, Gentile 2007)

**Transition moments of the city**

From a cultural and political point of view there are specific transition moments that define the final urban expansion of Bratislava. The urban environment of the city is a composition of distinct elements that reveal different conditions of morphogenesis. The medieval town consists the core of the city. “A generalized spatial pattern exhibits some signs of distance dependency towards the center, the old town core in following order: dense inner city, early industry/ transportation zones, garden city, several generations of functionalist housing districts, modern industry and annexed semi-rural settlements in varying stages of physical agglomeration and transformation” (Ira, 2003).

The main periods of time that are responsible for the contemporary Bratislava are: the medieval, the industrial and the socialistic period of time. The different elements of these periods of time are the old city core, the rail and road system and the mass housing residences and public buildings that witness the presence of the Soviet Union. The main social transition moments of the city are: (a) the construction of the rail system at 1840 which created a totally new relation between the city and the natural landscape as it is a hard border, (b) the soviet union at 1968 and the population expansion at the period of 1948-1989 which created the largest expansion of the city and (c) the deindustrialization of the city which is indicated by the decrease of the manufacture domain at the period of 1990-2005. The medieval town is the basis and the first step towards to the urbanization of the city. It is essential to underline that the medieval core and the castle consists a protected historical zone thanks to its symbolic value and it is under renovation.
map. 04: map of nature culture and city
Conclusions

The economy of Bratislava could be summarized by main important moments:
1. In the modern period of time the economy of the city was formed in four independent phases. The periods of time 1948-1989 and 1989-2009 are the most crucial moments as the soviet union and the velvet revolution created a different reality for the city,
2. Bratislava throughout the all period after the onset of modern industrialization in Slovakia (period from Austria-Hungarian treaty in 1867) acting as a leader and winner of innovation in the field of economic development; this feature of regional leader of economy has become an important particularly during the last stage, when the economy of the country received in the post-industrial stage of development,
3. in the past of last twenty years, the economic base of Bratislava resolutely changed from production oriented to non-productive activities; that said, the economic base of Bratislava after 1989 successfully transformed, and Bratislava in this period benefited from a number of comparative advantages, which won after that, and
4. after 1989 which is the moment of the last crucial moment of the city, the economy and the growth of the city is not controlled and organised. It seems essential to make decisions and Bratislava should move its economy toward creativity and knowledge-based economic activities.
Spatial analysis and mapping of the city

map 01: open spaces map
We could indicate different kinds of open spaces in the region. There is the totally natural open spaces which are created by the water and green flow (Danube, Carpathians), the agricultural areas, the public open spaces like the parks and the squares in the city and the road system. We indicate a lack of public spaces in the city center and especially at the riverfront to Danube. Also, it is interesting the research on the borders-edges that these open spaces themselves and with the urban settlements creates.

map 02: transition map
The transition map presents two hard borders: 1. the border that the highway creates between the city and the Danube and 2. the border that the train line creates between the city and the Carpathians. Also, the transition map indicates the essential character of the bridges in the Danube.

map 03: water map
The water map of the old and the present streams and the main river of Danube, reveals the natural landscape. Some parts of the natural landscape have already covered by the city’s expansion or they coexist with the urban ground. The most interesting case which I will focus in a larger scale is the riverfront to Danube and the stream which coexist with the motorway D2.

map 04: density map
The density map reveals that Bratislava is a mono-core city as the city center is the most densely area in the city. There are some other densely spots all around the city which is the residential programs which took shape at the soviet period. It is essential to underline the low density at the riverfront of Danube which reveals that there is space for future interventions all along it.

map 05: urban expansion map
The urban expansion map reveals that the first expansion of the city was around the medieval city center. At first the city was expanded at the right side developing also an industrial zone because of the fact that there was the natural landscape of the valley which is an easy ground for construction. Since 1970 the urban expansions of residential programs took place at the left side of the city. Nowadays, the city tends to be expanded at the left side which is the start point of the little Carpathians.
map. 01: map of open spaces
map. 03: map of water system
map. 04: density map
map. 05: map of urban expansion
Spatial analysis and mapping of the city

conclusions of the mapping | SCALE A

The open public spaces in the city are few and they are limited only in the city center. In contrast to this, the road infrastructure is a strong barrier among the different spaces and in some cases it is connected with the industrial zone that it is right now out of order. The regime of the soviet union becomes obvious by the residential programs, the strong infrastructure and the landmarks of the bridges. In that context, the most powerful public spaces are the pedestrian areas in the medieval town. The medieval town has a bad connection with the riverfront and the rest of the city. It is obvious by the mapping and the social context of the city that Bratislava is nowadays, a city in progress and continuous change. The unstable political condition of the city created an incoherent urban environment.

In correlation with the research question that this thesis examines about the re establishment of the connection of city, Danube and Carpathians, and the mapping, there is a strange relation between the natural and the urban ground at the edges of the city which is also, the transition spaces that the city could be developed at the future. So, it is essential the study on the different edges of natural and urban ground of the city.
In this thesis we use the term edge to describe the borders and the line which the natural and the urban ground meet each other. These areas in the city work as a catalyst for new interventions, transitions between the city and the natural environment and places that new relationships between the nature and the culture could be established.

In the study of the edges in the city of Bratislava we traced different typologies of edges:

- MOUNTAIN-AGRICULTURE-VILLAGE-TRAIN
- VILLAGE-AGRICULTURE
- VILLAGE-AIRPORT
- CITY-TRAIN-AGRICULTURE
- MOUNTAIN-AGRICULTURE-TRAIN-VILLAGE
- VILLAGE-MOUNTAIN-VILLAGE
- ROAD TUNNEL-WATER-ROAD-MOUNTAIN
- ROAD-BRIDGE-PROMENADE
- CASTLE-MOUNTAIN-PROMENADE-RIVER
- CASTLE-OLD CITY-ROAD-OLD CITY
typologies of edges
From the research at the edges of the city, I select the most crucial edges in relation to my research question to work on.

**selected edge conditions | site specific approach**

The selected edges are developed along two axis which are intersected each other and offer a spatial connection between city, Danube and Carpathians.

**EDGE A**
The river front to Danube: the edge is developed as an corner point between the medieval city core and the riverfront of Danube. There are three different sections along this edge.

section 01: medieval city-Danube
section 02: castle of bratislava-slope-Danube
section 03: slope-Danube

**EDGE B**
The motorway D2 and the stream: the edge is developed as a middle point in two layers- the stream and the highway. In the valley, the highway and the stream at two parallel flows which are intersected. The highway D2 connects the Czech border at Kúty with the Hungarian border at Čunovo, passing through (ordered north to south) Malacky, Bratislava and Jarovce.

The two edges have some common characteristics:
- they consists water and road infrastructures as there is a river or stream and a highway in both cases.
- they are borders between the natural and the urban landscape.
- around them are developed residual empty spaces because of the highways which are work as natural holes in the urban context.
sections of selected edges

edge a: riverfront to danube
castle-slope-river

city-highway-castle-danube

edge b: stream + highway
slope-tunnel-stream-slope

highway-danube-stream mouth
introduction to the edges | Bratislava

chapter I

PART B

scale B

introduction to the edges | Bratislava
The first plans on D2 motorway/freeway appeared in the 1960s, from the Czechoslovak government act in 1963 to build 117 km long motorway from Brno to Bratislava, with 58.4 km in today’s Slovakia. The construction started on April 1969, with the first section from Bratislava to Malacky, which was open on November 1973. In 1974, construction also started on the Czech side from Brno, with the two ends of the motorways joining on 8 November 1980, a day, when also the D1 motorway in the Czech part of Czechoslovakia was completed, joining the three most important cities in the country (Prague, Brno and Bratislava). A new planned segment from Bratislava to the Hungarian border was added in 1987. Construction continued with the building of the Lafranconi Bridge in Bratislava and the junction with D1 motorway junction and temporary end in Petržalka in the years 1985 - 1991 and after its opening, construction stopped for five years. Construction resumed only in 1996, with the sections from the temporary end to Hungary and Austria, with all being opened in 1998 and with the 8.5 km segment from D4 junction to the Hungarian border being widened in 2002. Today, the motorway is complete, with the last 3 km in Bratislava opened on 24 June 2007. This section contained the only tunnel in its entire length, the Sitina Tunnel.

As of 2012, part of the D2 highway is still not officially finished as it was put into temporary use 12 years ago and the paperwork to legalize the section of the highway near Petržalka is unobtainable due to excessive noise levels.

EDGE A | riverfront to Danube

The riverfront to Danube is consisted by a linear route all along the river. Important point in this route is the fact that it is attached to the medieval city and the castle of Bratislava. The highway in front of Danube, creates two different conditions: the first is that it interrupts the relation between city and river and the second is the creation of a residual space that is a slope at the riverfront. In the past, this highway was essential as it was the faster way to connect the industries of the city to other cities. After the deindustrialisation of the city, the size of the road is not relevant to the motion that the city has.

This edge is intersected with three roads that are the bridges to Danube. The one of these bridges works as a border between the city and the castle.

EDGE B | Motorway D2 and the stream

The edge of the motorway and the stream is developed in the middle of a valley. In the past, the stream worked as a water flow between the Little Carpathians and the Danube. The elements of this edges are: the bridge and the stream mouth to Danube which is the area also, of the botanical garden and the tunnel which signs the end of the motorway in the area.

D2 is a motorway (Slovak: diaľnica) in Slovakia. It connects the Czech border at Kúty with the Hungarian border at Čunovo, passing through (ordered north to south) Malacky, Bratislava and Jarovce. It is part of the European routes E65 and E75 and of the Pan-European corridor IV. The construction of the 80 kilometers long highway started in 1969 and it was finished in 2007. It is the only complete highway in Slovakia.
The historical maps of the two edges reveal the processes that the two edges have experienced. The total natural landscape is covered step by step by the urban landscape and the strong infrastructures of the highway, motorway and the train rails change the existent landscape.

1810-69: the landscape is a composition of the two different water flows. The stream and the Danube construct the natural landscape in correlation with the medieval city and the castle.

1875-84: the railway and the first bridge are appeared and change the image of the medieval city

1920-34: there is the further development of the rail system in the riverfront and the first traces of a new rail system in the region of the stream

1952-57: there is the further development of the rail system in the stream and a system of roads in the same place which works as omens of the motorway in that place. Also, we could notice the adding of the highway at the riverfront.

1957-71: the motorway in the stream is already done and the highway, the train system in the riverfront. This map is the final image that the two edges have nowadays.

1955-61: the only change is the adding of the two other bridges which construct the final image of the city.

It is really interesting the historical reading of the site as all the element that we would work on at this thesis are revealed step by step.

The most interesting moment of this historical analysis is the period of 1952-57 which indicates all the processes that the site has been undergone. The layer of the natural and urban landscape are in a strange balance and interact each other, revealing the future new ground.

From the historical analysis, the site specific elements are part of three different grounds: the natural, the medieval and the industrial ground which reveal their nature through the water, the road flow and the medieval city.
historical maps of the edges | 1810-69, 1875-84
historical maps of the edges | 1920-34, 1952-57
historical maps of the edges | 1957-71, 1955-61
masterplan of the current situation
The masterplan with the functions reveals the main characteristics of the two edges and the elements that we could work on. The two edges work as a spatial link between the city, Danube and Carpathians.

On the one hand, the riverfront of Danube offers the opportunity for a public intervention which could work as the main public space of the city and could be the end of the pedestrian flow of the enclosed medieval city.

On the other hand, the development of the motorway as a public space and the transformation of it to a public accessible space could give the opportunity to a further urban expansion of the city. This transformation would pose the ground for a controlled expansion of the city with residential programs which could be a part of the landscape and suggest a living with the nature and not as a contrast to it. The expansion of the university to that side suggests a new character of the region towards the culture as a domain of future development. The motorway is transformed from a non-place as Marc Auge writes to a central point of development.

The proximity to the medieval city and the castle offers the opportunity for a new strong public space. The functions of the sports, botanical garden, university and zoo are existent elements that the intervention could work on.
site functions of the current situation
sectional analysis of the Edge A | riverfront to Danube
sectional analysis of the Edge B\ motorway + stream
chapter I

PART C

scale C

introduction to the riverfront | Bratislava
The promenade used to be the site of the most popular urban public activities. Since the 19th century, it was a common and main meeting place used every evening and on Sundays by younger and older generation; the urban custom of walking on the promenade was still alive in the 1960s. After the period of the attempt of introducing democratic changes during the Prague Spring in 1968, a dogmatic period of communism called ‘normalisation’ started.

The promenade as a public meeting place of mainly young liberals became dangerous for the regime. Regular police patrols discouraged people from walking and talking. The promenade was officially designated as a place of illegal gathering and vanished at the beginning of the 1970s [Luther 2003].

The Danube waterfront used to be a harbour area and an unused public space until recently. The part of the harbour close to central areas of the city lost its main functions due to limited ship transportation, and offered opportunities for new property developments. Nowadays, the idea behind the project of revitalisation of the promenade was to attract city dwellers and to bring the urban way of life back to the Old Town by reviving the sociocultural as well as the residential functions of urban spaces.

contemporary interventions

The River Park Project with luxury apartments and a five-star hotel, or the Eurovea Project with upmarket apartments, shopping malls, Sheraton Hotel and leisure parks that should extend the historic city centre down to the banks of the Danube, are just a few examples of the new development.

These areas represent urban spaces that used to be closed to the public during the socialist past, do not appear in the collective memory and play no role in the formation of the present identity of city inhabitants. According to the development projects, new neighbourhoods should become important areas of urban communication and integration; however, they seem to target only upper-class residents and are reminiscent of a gated community.

Large property developments are also occurring in other parts of the city. Many new skyscrapers do not respect local urban structure, topography or link themselves to local identity (e.g., Twin City, Millennium Tower, Polus Center, Green Tower, Obydick, Panorama City, Emporia Towers, Residence Tower etc.). Only a few buildings show some relation to local identity by using names that still exist in collective memory of city dwellers: Aupark, Apollo, Slovany or Klingerka. Civic activists warn of a new architectural uniformity of glass-aluminium buildings that does not contribute to the uniqueness of the place, does not respect local symbolism and damages the local image of the place. The traditional features of urban spaces in Bratislava may slowly disappear.

The proposal of a towers region from Zaha Hadid illustrates all the above concerns about the city of Bratislava.
river park project | Eurovea

Zaha Hadid towers
Except of the contemporary interventions in the riverfront, the elements that construct right now the environment of it are:

a. the medieval city  
b. the castle  
c. the national gallery of Slovakia  
d. the bridges  
e. the residual area of the slope  
and all these different elements are connected with a highway.

**analysis of the main elements**

**a. the medieval city**

The 1989, the City Council decide the renovation of the historical center of Bratislava. A number of historic buildings, fountains and art monuments were restored to their original image as part of place-making strategies. Privatisation, restitutions and changes in property rights led to a rapid restoration of a number of buildings by new owners. The City Council presented and approved the idea of a revitalisation of the promenade, and invested in the physical reconstruction and/or the creation of open public spaces, such as historic squares, pedestrian zones, pavements, outdoor stalls and street furniture in the city centre. Despite all attempts by the City Council and urban planners to follow this strategy, political and socio-economic global pressures during the transition to a market economy slightly changed (or challenged) their original ideas. The high costs of reconstructing historic buildings, the shortage of spaces for new embassies and consulates, and the increase of tourists from all over the world limited the new functions of the city centre, especially its residential functions. The majority of buildings have been inhabited by companies, enterprises, banks or embassies.

Commercialism and tourism have been the main driving force of most business plans: expensive as well as fast-food restaurants, pubs, cafés, souvenir shops, jewellers and designer shops – famous symbols of globalisation – remind every visitor of any other big city in any other country. Only some buildings have managed to revive and preserve their original pre-socialist identity and function (e.g., Café Mayer or Antiquariat Steiner).

**b. the castle**

The castle, like today’s city, has been inhabited for thousands of years, because it is strategically located in the center of Europe at a passage between the Carpathians and the Alps, at an important ford used to cross the Danube river, and at an important crossing of central European ancient (trade) routes running from the Balkans or the Adriatic Sea to the Rhine river or the Baltic Sea, the most important route being the Amber Route.

It was decided to restore the castle. Archaeological and architectural research started in 1953 and long restoration works began in 1957. The restoration was done to the last (Baroque) state of the main building, but at many places older (Gothic, Renaissance) preserved elements or parts have been restored. Since 1968, the castle has been housing exhibitions of the Slovak National Museum and at the same time its rooms have been used by the National Council of the Slovak Republic (today the National Council of the Slovak Republic) for presentation purposes. In 1992, the castle housed a branch-office of the Czechoslovak president temporarily and later in the 1990s the Slovak president temporarily. It still houses the...
museum and the presentation rooms for the National Council of the Slovak Republic and for the president. A new restoration has been planned for years, because since 1968 (except for adding the Hillebrandt building) only minor adaptations have been performed, such as the 1988 creation of the Treasure Chamber, the 1995 replacement of glass in the arcades of the solemn staircase, and the 1996-97 complete repair of the roof.

c. national gallery of Slovakia

The building is in the riverfront of Danube and is consisted by a complex of buildings which is made up of the original structure of the Baroque Water Barracks with an additional structure (the bridge and administrative building from the 1970s) and the Esterházy Palace (built in 1870).

d. the bridges

Three are the bridges in the riverfront of Danube and they work as symbols of Bratislava.

1. Bridge of the Slovak National Uprising
2. Old Bridge which works nowadays as a pedestrian bridge
3. Lafranconi Bridge

e. the residual area of the slope

This space is between the castle and the highway in front of Danube and right now, it is an empty space without any use. In the past, there was there the Jewish settlements which are destroyed in the communism period of time.
1. Medieval city

the public space at the medieval city

It is traced 4 public space typologies in the medieval city of Bratislava which work in a different scale:
1. the central square
2. the enclosed square
3. the corner public space
4. the enclosed garden

This public spaces creates a complex pattern of the medieval city. The central square is defined as the last part of the historical center and works as a big opened public space for the city. Its role is defined by the important building of the National Opera and 2 fountains.
The enclosed square is the second biggest public space of the medieval city and it is created as an enclosed opened space which is defined by the museum of the city and small pedestrian routes that end there. A fountain plays a key role for the centrality of the place.
The corner public space is created by the peculiar meandering streets of the medieval city which have as a result of the creation of small corners of nature.
The enclosed garden is a characteristic of the medieval buildings and it is a semi-public space that the residents of the building share. In the case of Bratislava, these spaces are given as parking lots, commercial activity spaces and public spaces.
element a: the medieval city
structure and size of the public spaces

1. passing
2. seating place
3. playground
4. important building
5. trees
6. founain as landmark
element a: the medieval city
analysis of the structure of the public spaces
**Element a: The Medieval City**

Analysis of the Functions of the Public Spaces
element b: the castle
element c: the national gallery of Slovakia
Problematic areas in the site

1. The river promenade is right now fragmented and without any cohesion. There are parking lots in front of the river and some abandoned sports facilities that they create a negative environment.

2. The highway in front of the river promenade disrupts the relation between city and river creating a strong border and residual areas. The size of the road is bigger than what the city really needs as it was constructed for massive industrial use that right now, is stopped.

3. The medieval city and its main public spaces have not any relation with the riverfront and the commercial uses of a modern extension of the city creates more complexity in the region.

4. The bridge SNP with its road is a central part of the city’s promenades and creates a disruption between the city and the castle. The two touristic landmarks of Bratislava are not connected. If somebody want to go from the medieval center to the castle has to go through a dark residual place of a bus parking lot.

Conclusions | SCALE C

There are some intentions of a restoration of the river promenade by the city council but these intentions are without a strategy for the general image of the city and leads to a topical and uncoherent result.

In that environment, there is a lot of space for new public interventions by which the city lacks. The question is how would be activated again the key role of Danube and Carpathians in the city of Bratislava.
problematic situation | uncoherent river promenade
problematic situation 2 | highway as a hard border
route from the central square with the national opera to the river front
roads as barriers
unspecific ending to the river

route from the city to the castle under the bridge

problematic areas 3,4 | no connection between city and river, no connection between city and castle
problematic areas 3, 4 | no connection between city and river, no connection between city and castle

problematic situation 4 | the highway as barrier between city and castle
The central part of the riverfront

This part of the riverfront is the most crucial moment of the riverfront as it is the central and most touristic part of the city and it has the most intensive problem that we illustrate before such as the bad accessibility to the castle and the two highways that create residual spaces around and in them.

The structure of this area is defined by the linear river promenade, the intersection of the two highways, the city center which is defined as a structure of three different typologies and the castle.

The important functions of the castle, the National Gallery of Bratislava, the Universities, the Opera and the central square create the conditions for a public intervention. The residual space of the highways which is the region under the bridge and the slope in front of the castle consist the empty spaces for a new intervention.

map 01: in the map of functions, we could read the different parts of the city and the main function of the design area. There are commercial, cultural, residential, educational and official services that define the spirit of the region. People for different purposes and aims pass from the region.

map 02: the map illustrates the road structure and the pedestrian area in the historical center. The different patterns define the different buildings typologies of the city.

map 03: the illustrates the main patterns of the city in relation with the structure of the main public spaces of the city: the main opera square, the enclosed museum square and the castle and the river promenade, slope. The map aims to show the relation between the city patterns, the existent city elements and the potential spaces for a future intervention.
map 01: the functions
map 02: the transition map
map 03: the patterns, the city elements and the potential intervention spaces
part A

design through scales
"Massive architectures and dense infrastructures, as well as the irresistible utility logics that organize much of the investments in today’s cities, have produced displacement and estrangement among many individuals and whole communities. Such conditions unsettle older notions and experiences of the city generally and public space in particular. While the monumentalized public spaces of European cities remain vibrant sites for rituals and routines, for demonstrations and festivals, increasingly the overall sense is of a shift from civic to politicized urban space, with fragmentations along multiple differences." (Sessen, 2006:2) Bratislava is among the cities that experience the above kind of phenomena. The unstable political situation of the city until the 90’s created a slowly rhythm of its economical development and thus, spatial development. Therefore, Bratislava like the majority of the capital cities of the East Europe, experience now extensive changes with high pace of restructuring and constructing. The city is continuously developing and reforming the existent situation. In the era of globalization the cultural characteristics and differences of the countries lose their meaning and thus, their power to influence the spatial development of the cities. The public spaces of a city should express the motion of the city and be essential places of cultural exchange. They would indicate the image of the city and be exponents of the society.

Main themes of the thesis

In this thesis two themes are opened in correlation with the main research question that is about what could be the relation of nature in the contemporary cities and especially, in the case of Bratislava. The first theme is the the site-specificity that could lead to a design based on the region’s natural and cultural characteristics. The second theme that is introduced is the idea of the edges as remains of the de industrialisation at the sprawling city. Robert Smithson defines the remains of the industrialization as negative ruins and spaces in an entropic situation. They consists natural holes in an entropic situation. The idea of the selection of the above themes is that the site-specificity is a general approach of the design in that thesis. Namely, the design practice aims to identify, reveal and transform the natural and cultural processes through scales of the site. The idea of the edges and their entropic situation suggests the site of the intervention that this thesis aims to deal with.

The site-specific approach was developed for first time during the 60s and 70s as a movement of landscape architecture that many designers, landscapers and artists tried to relate the environmental values of a place and the form of an intervention. The site-specific projects present as a unique approach in that moment. The respect to the cultural and geographical differences and the design within that basis, is a way that would give spirit and quality to a public space in a city context. The produced works explore the site-specific characteristics revealing a system of aesthetics that cultural and natural processes are intermingled. Lisa Diedrich propose a system of parameters that define the site-specificity of a project. This is an interesting approach to design and evaluate a project as far as the connection of the project and the site is considered.

Towards to a new public space

In that context, the reshaping of the existent public spaces and the adding of new one is essential as the public spaces consist vivid places for social interaction and cultural exchange,
a touristic attraction and from a literary point of view, places of the city’s image and memory. The natural characteristics and the natural resources are one of the main parts of the identity of a city as they were the initial reason of the sheltering of the city. "Environment, then, is no foreign territory surrounding the self. Understanding environment involves recognizing that human life is lived as an integral part of a physical and cultural medium, under conditions through which people and place join together to achieve shape and identity. Within this environmental medium occur the activating forces of mind, eye, hand, climate, and the other processes of nature, along with the perceptual features and structural conditions that engage these forces and evoke their reactions." (Conan, 2000: 193) Moreover, the spatial development of a city is defined by the natural characteristics such as the water and the relief. In the contemporary city, the idea of the nature as a system and the use of natural elements could play a crucial role on the development of the public spaces and the improvement of the existent ones.

The landscape architecture arises as a new scientific domain, tries to reconcile the environmentalism and the design practise. “This desire has inserted ecological environmentalism into the design process in many places—in programming, site analysis and interpretation, form grammars, and construction techniques. This impulse has also challenged the tenet of modern form as an isolated, bounded form or space experienced by a detached, contemplative observer by focusing on the construction of aesthetic experiences bound to, and enmeshed in, their specific cultural and ecological context.” (Conan, 2000: 188) It is about the question of how we could use the natural characteristics and process into a design approach, producing or adding new spaces in a city. In that context, the question of what is the role of nature in the context of a contemporary city remains open to new theoretical and design approaches.

This thesis suggests that the public spaces in different scales within a site specific approach is a way that the city and its contemporary urban ground could react with the social and the natural ground of the region, redefining and producing new meanings and experiences of the place.

The case of Bratislava

In the case of Bratislava, the fact that the city is located in the intersection of Danube and Carpathians consists a catalytic factor of its development. The historical center of the medieval city and the castle have a spatial relation between the city, the castle, the Danube and the Carpathians. The castle is located in the edge of Little Carpathians and it is next to the walls of the medieval city which has an opened side with a square at the riverfront. The riverfront is a place that its form was in a continuous change. This is an outcome of the fact that it was a place of products exchange via water and road routes. Therefore, all the changes of the city that influence its economy and its commercial activity like the industrialisation, were the reason also for a spatial changing.

The analysis and the study of the city in different scales shows that the city has few public spaces which are defined by their context and not by themselves. Namely, their meaning and importance for the city, is limited by the surroundings of them and not by their functions and structure.

The site

In that context, the design thesis is concentrated at two edges of the city: the riverfront and the motorway D2. The two edges have as common
characteristics the river and stream processes and the fact that both of them consist areas of de-industrialisation as they are defined by a motorway and a highway which create residual areas around them.

The design approach of these two edges is a multi scaled analysis and design. It begins with the relation of these edges and the whole city within its landscape of Danube and the Little Carpathians and ends to a crucial point in a system of small public spaces in the city.

The elements
Towards to a site-specific approach that leads to the creation of a row of public spaces that function as a narration of the city - a story with spatial terms, this thesis identifies three different grounds of the city which coexist, producing a new cultural ground. The three grounds are: the natural, the medieval and the soviet ground. In the selected intervention area the natural ground is about the intersection of the river and the stream and the Little Carpathians. The medieval ground is about the castle and the medieval city. The soviet ground is about the intersection of a highway and two motorways that becomes bridges in the Danube and the residual areas that they create.
spatial analysis of the different layers that form the site
three existent layers for the design principles

layer 1 | the natural ground
rivers and geomorphological relief

layer 2 | the medieval ground
palace and old town spots

layer 3 | the soviet ground
road infrastructure
Scale A
At a small scale, the strategy that this thesis develops is about a connection of the main peripheral public spaces as a flow that is connected with the cornered green space that the stream and the Danube create. The final green structure is connected with the little Carpathians that it is the first part of a big green corridor of Carpathians that ends the Black Sea and Romania, and with the intersection of Danube and Morava that created another extremely rich natural environment in the Devin region. As far as the city is concerned, the thesis proposes the enlargement of the pavements in main streets that would work as active public spaces intensifying the cultural interaction, and working as routes that connect this green flow to the city. This structure would lead to a better connectivity and improvement of the environmental quality at the residential areas.
1. Strategy scale A

2. Strategy section of atmosphere A at the connection between the public spaces
At an intermediate scale, the intersection of the two edges works as spatial link between the medieval city, the Danube and the Carpathians through a system of public spaces. The two edges deal with the environment in different terms as the one is a major river and the other a stream that connects the Carpathians to the Danube. On the one hand in that scale the design deals with complicated natural processes and the river’s scale has a different impulse at the city environment. Namely, it influences the riverfront of the city as far as the water flow is considered with intensive flooding problems. Furthermore, Danube is a water commercial route and participates as one of the main entrances to the city. Its participation to the city is not limited only as an entrance but its sizes influence the appearance of the riverfront and transforms it to a main public space as the river offers a unique natural environment.

On the other hand, the stream offers the opportunity of a spatial link between the city, the Danube and the Carpathians. Its presence improve the quality of the region which was decreased by the motorway. The proposal suggests a system which big roads could coexist with public spaces and be areas of extension of the city and not borders to it. The tendency of the city to move to the side of the motorway and the new shelters of the university institutions works as a parameter of the creation of a park along this stream. The park and the stream aims to create the conditions and the cultural ground of the residential expansion of the city in different terms towards a sustainable and more natural way of living. This would be apparent with the control of the residential typologies, the intensify of the agricultural functions as to be created new sustainable communities.
conceptual connection of the two edges as a urban, green and cultural flow
masterplan in Scale B

road garden

the bridge, the surprise garden
the stars garden
the cultivation garden
the educational garden
renovation of that part of the city
new residential area
the botanical garden

the port

the river garden

the square

the theater garden

the hortus conclusus
1. bicycle and pedestrian routes
2. road and tram routes
Scale C

At the scale large scale, the project deals to some focal points of the two edges that describe with precise the proposed situation of the intermediate scale. The main focal point is the intervention area in the city center which aims to create a system of public spaces that correspond to the research question and the needs of the city. The result of all the above is the creation two different flows that intersect each other: the urban and the natural flow. There is the urban flow of the medieval city that is expressed by the extension of the axis of the central square of the city with the opera and the creation of a port in Danube as main entrance to the city. The result is a meeting corridor of travelers, commodities, tourists and residents. A public space with continuous motion all the day. It is proposed a opened market area that it was a past situation.

The creation of these public spaces restructures also, the area between them that it is a triangular space. In that space it is proposed a public space with correlation with the qualities that we find in the medieval city and the function of a small theater and a new residential program. The result is that the modern extension of the city obtains some of the characteristics of the medieval city with the function of the theater as a main public space. The new residencies intensify the atmosphere of the region as all the buildings have different functions such as residential, cultural and commercial. This enclosed situation is connected with the riverfront with small routes. The main of these routes is through the National Gallery of Slovakia which had an enclosed garden which is extended at the riverfront creating a urban water garden.

The natural flow of Danube and Carpathians is expressed as a forest with a sum of gardens and a water garden in Danube. The water garden is different levels of surfaces that have small soil and water interventions and the different levels interact with the river water level and the river fluxuation activating different parts of this public space. Therefore, this intervention works as an indicator of the river system and the seasoning. The forest begins from the main square that it is transformed to a port. The route is inside the forest and begins with a ramp that also, connects the water garden, the port and the castle. All along this route, the visitor has different experiences via the gardens that he finds. The experiences work as a narration through different experiences that somebody has in a forest.

The garden design and their functions work as a transition between the urban and the natural environment, defining different kinds of experiences and use of natural characteristics. Their form and their functions are defined by the landscape, the location and this transition from the urban to the natural world. The first garden is the educational garden that it is about the wine production and procedure. The visitor goes through the ramp and on the one side has the forest and the other the vineyards. This is a reference of a past image of the place that the wine production was a main economical field of Bratislava. Also, it is a reference of the use of nature. The second garden is the friend garden- it has small residences for tourists or students and a garden of edible species. The nature is used as a factor of communication and cultural exchange. The landscape and the landform of the place gives the opportunity of a frame to the Danube. So, the framing as an experience that you have in a forest, is activated.
It works as a place that has thick plantation and the view in the sky is indicated. It is the garden of the stars which involves a surface with holes that somebody has different glazes to the sky. The forest ends to a bridge that connects it with the riverfront to Danube. The bridge is a slow descending to the natural part of the river where is also, the mouth of the stream. In the rest part of the intervention, somebody in the road to the Carpathians could find different gardens with main the botanical garden and the road garden.
1. water descent
2. elevation
3. cutting
4. frame
5. opening
6. stream valley

*diagrammatic experience route at the forest*
masterplan with the focal points and the main region
different types of riverfront at Danube | a transition between the urban and the natural

1. masterplan
2. semi-urban profil
urban profile of the riverfront, road and tram
1. semi-natural profile A
2. semi-natural profile B
1. natural profile
2. details of the stream soil and water banks
1. plan of the two rows: the urban and the natural that come together in the motorway area
2. material detail of the river garden

*main focal intervention area*

- different water levels in accordance with the different river flow
- seasoning, movement changes
perception of the river garden with the port
focal point 1 | hortus conclusus, theater garden and the residential area
detail of the theater garden

section B-B'
focal point 2 | the educational garden and the port
section A-A’
detail on the section

detail on the roof of the buildings
focal point 2 | the educational garden and the port
detail on the observatory
observatory of the spring

plan with the garden of edible plants and the eco-residences
section A-A’
detail on the section
focal point 4 | the stars garden
section A-A'
detail on the section
focal point 5 | the bridge
the facade of the riverfront

01.00

02.00

03.00

collage route to the project | start point of intervention to the 1st connection to the old medieval square of the city
collage route to the project | the urban garden in the river front | connection through the gallery
collage route to the project | back to the river | the descend to the river garden | you
collage route to the project | from the port quare to the forest | you are between the forest and the vineyards
collage route to the project | connection to the castle through the forest, the vineyards, the educational garden 
the tourist, the producers, the students
12.00

collage route to the project
you are in the forest | you find different gardens | City, Carpathians and Danube meet each other
chapter II

part B

scientific part of the natural systems
stream

high areas

ground water concentration zone

overflow zone

river

water map
map of the green corridor
diagram of the green corridor
native species of Carpathians for the forest recovering
shrubs
bellis perennis
different types of grass
lavender
papaver rhoeas
primula vulgaris

trees
quecus ilex
carpinus betulus
betula utilis var. jacquemonti

edible trees
orange tree
lemon tree
chestnut
tomatoes
courgettes

seasoning changing trees
cercis canadesis
acer palmatum
magnolia stellata
Acer triflorum
main materials of the project

- exposed concrete
- natural wood texture
- colours grey, orange
- diamond-sawed Jura limestone
- wood
- cast in-situ concrete with glass aggregate
- stamped blasted red-yellow concrete
- stamped smooth grey concrete
- rusted waterproof steel
chapter II

part C
PHASING
intervention at the two edges
connection and reformation of the existent public spaces
construction of the riverfront PART 1

stream development

restructure of the existent area | residences, offices

expansion of the residential area around the stream

1 port area

3 forest with the gardens

2 forest with the gardens

phasing at the intermediate scale | scale B
existent situation

2015-27
phase 1
river promenade

2015-27
phase 2
inside garden, square

2015-27
phase 3
port

2015-27
phase 4
forest start point

phasing at the large scale | scale C
reflection of the design through scales

The main research question of this thesis that is what the relation of a contemporary city and nature and natural landscape could be, remains open to new interpretations and design approaches. This thesis aims to research and reveal a new way of analysis of the city and selection of the elements-spatial tools to create the conditions of a narration of the city. In an urban context, the notion of the nature and the natural landscape is a blend of natural, cultural and urban characteristics that constructed a new ground which is what is the natural landscape for the city. This thesis defines as natural the processes that intervene in that new ground and transform it to a natural one. In order to answer this broad research question I select the case of Bratislava as a place that it is right now in fast transformation and experiences all the positive and negative aspects of globalization. The design approach is through scales to answer in a spatial way at this research question. The design region is two edges that consists by the river Danube and a stream. The urban context of the edges is the medieval city and the natural context is the large natural flow of the juxtaposition of Danube and Carpathians.

The site-specificity that this thesis suggests is a strong analytical and design approach that underlines that uniqueness of a region and a landscape in different scales. In the period of globalization that large projects transform the image of a city into one-two months without any kind of respect in the scale of the city, the atmosphere of it and the social characteristics of the residents, the site-specific approach is an essential idea that could lead to a connection of the natural, the urban and the new intervention ground.

This is a critical position and eye on master plans or three dimensional images that big offices propose nowadays, for cities like Bratislava that are under massive reconstruction. One important example on this, is the proposal of Zaha Hadid for a part of Bratislava.

In that context, in a metropolitan scale the selection on working in the edges of the city is an approach that leads to positive results as the edges offer the opportunity of empty or low-densed areas which have ground for future interventions and give the potential for future sustainable expansion of the city. The selection of the edges of Danube and the stream is essential as far as the research question is considered because the result in the metropolitan scale, is the interaction of two large green systems of Danube and Carpathians. The Little Carpathians is the first part of the large range of Carpathians which is developed through the whole East Europe and the corridor of Rhine and Danube connect the central and the East Europe. So, this intersection has an essential role for the function of these systems. Within this fact Bratislava obtain a crucial role because of this intersection which was the initial reason of sheltering the city. Also, its urban form takes a new meaning because of the interaction with these two green systems.

In an intermediate scale, the selection of working on the existent road flow of these edges and relate them in a positive interaction with the natural flows(rivers) is crucial for the city. Moreover, the spatial link between the City, the Danube and the Carpathians offers the opportunity for a new big public space for the city that change the image of it and the life of the residents. Also, the intervention change the environment of a main edge of the peripheral zone of the city which is
the part that the city tends to expand. The motorway stops to have a negative impulse on the landscape and becomes a part of a big public space (park). This public space creates a new natural landscape and sparks the residential expansion around it in different terms and towards a way with balance with the natural elements.

In the large scale, the design is related with the research question via the transformation of the riverfront and the recovering of the forest at the edge of Carpathians. These natural elements interact with the added and the existent cultural layer of public spaces. The natural elements of Danube and Carpathians are introduced again at the contemporary city with different terms and reaction with the cultural layer. The meaning of the natural processes, the dynamics of the landscape, the production and the experience of a natural landscape are crucial parts of the design at that scale. The water garden, the vineyard with the educational shelters and the forest gardens are the design outcomes at the largest scale towards the answer of the main research question.

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The general theme of the graduation thesis in the master of Landscape Architecture is the Flowscapes. The Rhine and Danube create a corridor which runs the central Europe and ends at the Black sea. In that context, the studio aims to work on the green, water and road infrastructures that create different flows in the landscape. The studio research these flows in the context of the corridor of Rhine and Danube.

In that Frame, the case study of my thesis is Bratislava which has a river front at Danube. The selection of this case study is in relation of the unique geomorphological position of it. Bratislava is located at the intersection of two different infrastructures and flows: the green and the water, as the Little Carpathians and the Danube create a corner which Bratislava has constructed.

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The methodical approach of the thesis is based on two different themes: the site-specific and site-generated theme and the industrial remains as a natural landscape in an entropic situation. These two themes leads to the selection of the research on the edges of the city and finally, the selection of the specific site. They are two themes that they are related to the natural processes and dynamics of a site and lead to a design that works as a narration for the city of Bratislava. Carpathians, Danube and medieval city interact and are reactivated all along this site intersection.

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The thesis is involved with the wider social context as it deals with a big question of the future development and expansion of the contemporaries’ cities as to obtain a better standard of life for the citizens and a balance between the natural system and the human intervention. Also, this idea is more essential for the cities of the East Europe and the cities after the Soviet Union as they seem to be in a crucial moment of their development. Also, this design suggests a general attitude that should be developed towards the positive or neutral impulse of the massive road systems that define the most of the peripheral zones of the contemporary cities.
The design goes through three different scales: the metropolitan, the intermediate and the small scale. The site selection of that edges of the city is essential as the analysis of the current situation indicates that they are two regions that consist crucial moments of the city’s future development. In different scales, the intervention areas react with the existent urban and natural patterns. The selected functions of the design indicates that use of the natural processes, the regional characteristics and the promoting of the educational and the cultural character of a city could lead in a sustainable future development of it. The industrialisation with the massive construction and fast technological rhythms causes an uncontrolled expansion of the cities and big social changes. The public spaces as one of the most important images of the spatial and social changes, present undefined without a powerful important role for the society.

The design at a large scale which is the moment that all the urban, natural and social interactions are obvious in a real level, achieves to regenerate the riverfront in correlation with the city existent elements and the urban and natural flow works creating the port and the river garden. The concern on this situation, is if the proposed public spaces and the garden could really work as powerful points in the city realm. We design the condition but not the events in a city environment. So, the question is how and what the duration that these public space would be essential elements of the city.
chapter

PROJECT REFERENCES

RE • SHAPING THE EDGES | Bratislava
The new public space was to be a meeting place, a leisure area and a zone where people could relate with nature. The specific requirements of the project were established by means of a participative process that included a public exhibition with 85,000 visitors as well as organising fifteen workshops with a total of 600 participants, these focusing on discussing details of specific areas, for example sustainable transport, aquatic activities and fishing.

After the intervention, the left bank of the Rhône, effectively acts as a mediator in the senseless dispute between the city and its river. The reconciliation strategy consists of generously satisfying the demands of both parties. In the longitudinal sense, the intervention bows to the demands of the river, adopting a coherent and unitary form in order to flow into its majestic presence. This achieves a restitution of circulatory continuity on the territorial scale while bringing out the river’s major role in the genesis of the city. In the transversal sense, the new riverfront unconditionally obeys the requirements dictated by the city. It becomes permeable in order to respond to the different urban situations it flows through, in such a way that the intensity of the equipment and the degree of built-up intensity diminishes with distance from the urban centre.
The solution applied to the Montjuïc Heights extended beyond the zone itself, as it depended on systems linking it to the city. It was important to preserve and develop the heights as a green space, but it was at least as necessary to make this the central space on the mountain in terms of urban development, completely reversing its present marginal status. Good accesses were required, along with much greater intensity of use. The heights were to be converted into a basic element in the city’s network of parks and open spaces. Montjuïc should be Barcelona’s great urban park, and the heights converted into the very heart of the mountain.

We appreciate the main features of the intervention, and mainly:

• Providing an entrance to Montjuïc from the highest point on the mountain, via a collective transport system up to the castle to help pacify traffic and make the visit to the park an easy walk downhill.
• Building a longitudinal axis based on the existing road, Heights Walk, to connect this ‘Green Acropolis’ from one end to the other.
• Reclaiming the castle and its adjoining spaces for decidedly civic uses, making this castle a powerful centre of activity and completing the sense of the new, central gateway to the mountain.
• Turning the entire heights in a Green Acropolis. A pacified green area, taking the existing vegetation as the starting point.
• Restoring the elements of archaeological and historic interest on the mountain (castle, silos from the old port, Roman quarries, Iberian settlement, sacred art in the lower part of the cemetery…) and making them accessible and possible to visit.
The park is a central element in an important project designed by Norman Foster in the center of Barcelona. Inside of the park is flanked by the project’s new buildings, the other gives on to an expanse of water that roofs over the railway line. The park area, which is shaped like a large vertical half-moon, is broken up by series of oblique “barrier walls” that extend the urban grid of Foster’s design and thus provide a transition between the city space and the garden. To emphasize this effect, the oblique layout has also been applied to the plantings, which extend from one wall to the next across uneven ground. In contrast to the severity of the walls, Mediterranean landscapes, wild if not desertlike, have been chosen, adding a particular flavor to the overall design.
Recalling the patterns of braided river channels that flow around exposed accumulations of sediment deposited by receding floodwaters, this monumental earthwork is quite different from the singular, figural quality of Candlestick Point Cultural Park’s great terrace. Moreover, the earthworks at Guadalupe are intended to perform environmental work over time. This artificial braided earthwork, made of hundreds of triangular cuts and fills, parallels the river banks in the northern sector of the park.

For Hargreaves, this mixing of forms makes evident the artificiality, or the constructed nature, of his urban landscapes. His efforts to reclaim industrial riverfronts and to manage floodwaters do not mask human creativity and construction under a veneer of pastoral informality. Rather, the interdependence of natural and human processes in such projects is manifest in the interdependence of geomorphological and geometrical forms. At Guadalupe River Park, a three-mile-long recreational/storm-water control project (Fig. 17), Hargreaves replaced an engineer’s vision for managing the river’s floodwaters inside seventeen-foot-high walls with a constructed floodplain of varying widths. The form and character of the floodplain vary depending on the adjacent urban conditions—proximate cultural institutions, road overpasses, and a recently demolished neighborhood. Near the former neighborhood, downstream of the city, the park’s surface is made of elongated, streamlined mounds and hollows (Fig. 18). Hargreaves designed this braided earthwork to fill the vacant blocks of the dislocated community and return some of the area back to its floodplain function—that of retaining waters during heavy rains, reducing downstream flooding, and purifying the percolating water. The form these braids adopt when extended into the cleared neighborhood grid is another example of Hargreaves’s composite vocabulary. Grid and braid overlap to create a complex, undulating tapestry of future garden plots, bosques, and rivulets. The river encroaches the city, creating a surface of negotiation between wet and dry, cultivation and constant movement.
chapter VI

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